

Farmer Dies when Skid Steer Loader Rolls Over Him after it Plunged over Edge of Bluff

SUMMARY

On October 22, 2003, a 43 year-old farmer died after his skid steer loader plunged over the edge of a bluff and rolled over him. He was filling in ruts on a dirt road close to the edge of a bluff by his field and planned to cut up a tree that had fallen across the road. He was using a new Case Model 40XT skid steer loader that he had owned about two months. The victim's father came to the farm and realized the victim had not returned home. He took the tractor up to the field to check on the victim and found the skid steer loader lying on its side over the embankment. (Figure 1) The victim was



Figure 1. Skid steer loader on its side, after rolling over the embankment

lying beside it. The father returned to the house and notified the Emergency Medical System. The sheriff was dispatched within 20 minutes and the emergency personnel were present when he arrived. They detected no signs of life and contacted the County Coroner. The Coroner received the call and pronounced the victim dead at the scene. The seat belt on the skid steer loader was not fastened and the safety restraint bar was up. The chainsaw the victim was going to use to cut the tree was located about 15 yards from the top of the hill lying in the vicinity of the path taken by the skid steer loader.

The FACE investigator concluded that to help prevent similar occurrences, farmers should:

- **always fasten the seat belt and keep the operator's restraint bar down at all times when operating a skid steer loader**
- **walk around the work area before starting to work and look for hazards. Use extreme caution when operating machinery on or near sloped terrain or embankments and consider doing work by hand where machine use may be too hazardous.**
- **read and follow safe operating procedures for skid steer loaders recommended by the Equipment Manufacturer's Institute (EMI).**

INTRODUCTION

On October 22, 2003, a 43 year-old farmer died after his skid steer loader plunged over the edge of a bluff and rolled over him while he was filling in ruts on a dirt road. The Wisconsin FACE Director/field investigator learned of the incident through the newspaper on October 25, 2003. The

FACE investigator reviewed the death certificate, the coroner and the sheriff's reports. On March 15, 2005, the investigator conducted an onsite visit, and interviewed the wife of the victim.

This incident occurred on the victim's farm that he and his wife owned and operated. The victim grew up on a dairy farm and continued farming throughout his lifetime. Two years before the incident, he purchased the farm from his parents. At the time of his death, the victim and his wife owned 200 acres of tillable land and raised corn, which was the primary crop, in addition to soybeans and alfalfa. He also owned 168 acres of woods. He raised heifers and dairy cows and milked about 50 cows at a time of the incident. His father and wife helped with milking twice a day. The family also raised golden retrievers, and had cats, rabbits and a goat for pets. The victim was close to his family and learned about farming from his father. He was the only one of his siblings who wanted to farm. The victim operated large machinery and was skilled at using the large tractor they owned for tilling. He was safety conscious and attended technological days for farmers and the World Dairy Exposition to keep up with the technology and safety in the dairy business and farming.

On a typical day, this family would start work at around 5:30 a.m. The victim's wife fed the cattle. In the summer she let the cows into the barn and the victim began milking. It took approximately an hour to finish milking. His wife would then return to the house and get the children ready for school so they could leave by 7:20 a.m. About 10:00 a.m. the remaining members of the family had breakfast. Following breakfast they planned their work for the day. They had dinner about 4:30 p.m. before doing the evening milking at about 5:30 p.m. The victim's father came over and helped with the chores. The children were outside with them. The victim was described as mellow, but outgoing with many interests. He had no functional limitations and was considered to be healthy.

INVESTIGATION

This area, on which the farm was located, had no precipitation for eight days. The temperature was 57 degrees on the day of the incident. On the morning of the incident, the victim led his usual routine. After the morning chores, he shelled corn and after breakfast, drove the skid steer loader to the woods. He planned to fill in the potholes in the road to his field at the top of the hill and to cut down a tree that had fallen across the road. His father was there that morning and both he and the victim's wife saw him leave about 10:30 a. m. His wife took the children and went to a nearby town. About 1:10 p.m. his father returned to the farm to get a wagon to haul corn and realized the victim had not returned home. He knew the victim was going to the top of the hill, so he drove the tractor up the hill to check on his son. To get there one had to go up the hill on a dirt road on the west side of the hill to the top. He found the skid steer loader lying on its side over the embankment and the victim lying beside it.

He immediately drove back to the house to contact the emergency medical system (EMS) located approximately four miles away. EMS received the call at 1:26 p.m. The victim's wife came home about 1:50 p.m. and saw the EMS personnel and the sheriff there with the victim's parents. They had examined the victim and found no signs of life. The coroner was notified and advised to bring an All-Terrain Vehicle (ATV) in order to access the victim. The coroner arrived about an hour later and pronounced the victim dead.

The road that the victim had been repairing was located at the top of the hill. The road was about 3-

4 feet from the edge of the bluff. At the edge, the hill dramatically developed into a very steep grade for about 20 yards. The terrain on the hill was wooded. The edge on top of the hill and the terrain were covered with leaves.

The skid steer loader went over the edge of the bluff from the road. There were divots and broken tree limbs in the path the skid steer loader had taken. The chainsaw was lying about 15 yards from the top of the hill and was in the path that the skid steer loader had taken. Tire tracks indicated the skid steer loader went over the edge of the bluff backwards and rolled about three times to a point about 30 yards down the hill. The skid steer loader was lying on its left side facing west. The victim was lying on his right side facing north beside the south side of the skid steer loader. The victim was thrown out of the skid steer loader and it rolled over him as he and the skid steer loader went down the hill. The seatbelt on the skid steer loader was not fastened and the safety restraint bar was up. The lift arms on the loader were not raised.

The skid steer loader was purchased new approximately two months before the incident; however, the victim had owned a skid steer loader before purchasing this one and used it frequently. The family sold the new skid steer loader following the incident.

CAUSE OF DEATH

The official cause of death was head and internal injuries.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Always fasten the seat belt and keep the operator's restraint bar down at all times when operating a skid steer loader.

Discussion: The seat belt protects the operator in several ways. The seat belt can protect the operator from being jostled and thrown against cab structures, out of the cab or into the operating zone of the lift arms and bucket. During rollovers, the seat belt maintains the operator within the protective envelope of the cab. Operators should not take their seat belt off or move the operator's restraint bar up until after the equipment has been properly shut down.

The Case 40 XT skid steer loader used in this incident was equipped with a retractable seat belt, a warning alarm for the seat belt reminder, an operator's restraint bar, and a tilt ROPS and falling object protective structures (FOPS) canopy with side screens.

Recommendation #2: Walk around the work area before starting to work and look for hazards. Use extreme caution when operating machinery on or near sloped terrain or embankments and consider doing work by hand where machine use may be too hazardous.

Discussion: Inspect all surfaces over which the skid steer loader is to travel. Pay attention to drop-offs, banks, steep slopes, hidden obstacles, etc. that may cause a collision or loss of control. In situations where machine use may be too dangerous due to the terrain, use of hand tools, such as shovels and rakes may be a more safe alternative method for filling in potholes.

In this case, the victim knew his land well. Many leaves were at the edge of the road and bluff that may have blocked his view of the underlying terrain.

Recommendation #3: Read and follow safe operating procedures for skid steer loaders recommended by the Equipment Manufacturer;s Institute (EMI).

Discussion: In this incident, the victim owned this particular skid steer loader for about two months and he had owned skid steer loaders in the past. It is unknown if there were any major differences in the safe operating procedures between his previous skid steer loader and the new one. Before operating a skid steer loader, all operators should review safety procedures and familiarize themselves with the following:

- The purpose of all the controls, gauges and indicators
- The rated load capacity
- The speed range
- The braking characteristics
- The steering characteristics, turning radius and operating clearances

REFERENCES

NIOSH Alert: (1998). Preventing Injuries and Deaths from Skid-Steer Loaders. CDC-NIOSH, Publication 98-117, February, 1998.

Purschwitz MA, (1999). Safe Use of Skid-Steer Loaders on the Farm. Madison (WI): University of Wisconsin Cooperative Extension Publications; Publication A3674, 1999.

Equipment Manufacturers Institute (EMI). 1989. Skid-Steer Loader Safety Manual for users and operators; 10 S. Riverside Plaza; Chicago, IL 60606; Form#SL30-3.

Ji Case Company. Case 1825 Uni-Loader Operators Manual. 2525 W. Hampton Ave; P.O. Box 09359; Milwaukee, WI 53209-0359; Publication Burl 9-11450.

New Skid Loaders. 2005, Binkley & Hurst Bros. Inc. Lititz, PA. Available at http://www.binkleyhurst.com/Sales/new_skid_loaders.htm.
Date accessed: April 2005.